|  |  |  |
| --- | --- | --- |
| Variable  | Univariable Odds ratio of hospital mortality (95%CI) | Adjusted Odds ratio (95%CI) of hospital mortality  |
| Age (per year)  | 1$∙$08 (1$∙$07 - 1$∙$10) | 1$∙$10 (1$∙$06 - 1$∙$14) |
| Sex. Male (Reference = Female) | $0∙99$ (0$∙$74 – 1$∙$3$2$) | $0∙$55 ($0∙$03 - 12$∙$43) |
| Pre existing disease status: Reference = None |  |
| Mild systemic diseaseSevere systemic diseaseSevere systemic disease that is a constant threat to lifeNot recorded | $43∙65$ (5$∙98$ – 318$∙$38)128$∙$83 (17$∙97$ -923$∙$69)44$∙$6$4 $(60$∙17$- 3226$∙74$)87$∙$00 (11$∙33$ – 683$∙$7$7$) | $6∙$70 (1$∙$35 - 1$21∙$84)13$∙$05 ($2∙$71 -2$35∙$54)$48∙$57 (9$∙$64- $887∙$82)$7∙$17 (1$∙$08 - 1$43∙$80) |
| Pre injury Anticoagulation status: Reference = not taking |  |
| Taking anticoagulants Not recorded | $4.36$ (3$∙20$ - 5$∙94$)$2∙92$ (1$∙86$- 4$∙59$) | 1$∙$53 (1$∙$06 - 2$∙$20)1$∙$53 (0$∙$80 - 2$∙$80) |
| Marshall Classification: Reference = Gd I (no visible pathology) |  |
| II CT abnormality Cisterns present (Midline Shift 0-5mm)III Diffuse Injury (Cisterns compressed/ absent with midline shift 0-5mm)IV Diffuse Injury (Midline Shift > 5mm)V Surgically-evacuated mass lesion VI Non-evacuated mass lesion >25cm | 1$∙21$ (0$∙$85 - 1$∙7$3)$10∙72$ (3$∙62$ – 31$∙8$0)$4∙98$ (2$∙1$1 - 11$∙79$)$2∙18$ (0$∙79$ - 6$∙$07)$23∙70$ (15$∙85$ - 35$∙42$) | 1$∙$34 (0$∙$85 - 2$∙$09)5$∙$40 (0$∙$77 - 2$4∙$60)$2∙$64 (0$∙$71 - 8$∙$37)1$∙$53 (0$∙$42 - 4$∙$23)$8∙$68 (4$∙$65 - 16$∙$06) |
| ED GCS  | 0$∙$73 (0$∙$71 - 0$∙76)$ | 0$∙$76 (0$∙$71 - 0$∙$81) |
| ED Pupillary reactivity: Reference = Bilaterally reactive |  |
| One pupil unreactiveTwo pupils unreactiveNot recorded | $2∙14$ (0$∙86$ - 5$∙32$)$120∙95$(57$∙06 $- 256$∙35$)$2∙$30 (1$∙3$3 - 3$∙95$) | $1∙$06 (0$∙$31 - 2$∙$82)16$∙$77 ($4∙$02 - 6$6∙$30)1$∙$40 (0$∙$74 - 2$∙$49) |
| Significant Extracranial Injury (AIS 3+)(Reference = No significant Extracranial Injury (AIS <3)) | 1$∙92$ (1$∙44$ - 2$∙5$6) | 1$∙$10 (0$∙$71 - 1$∙$70) |
| Low Energy Transfer(Reference = High Energy Transfer) | $4∙35$ (3$∙07$ - 6$∙15$) | 1$3∙$49 (0$∙$61 -$352∙$23) |
| Age: Sex (Male) Interaction | 1$∙$09 (1$∙0$8 - 1$∙11$) | 1$∙$02 (0$∙$98 - 1$∙$05) |
| Age: Energy Transfer (low energy) Interaction | $1∙08$ (1$∙07$ - 1$∙10$) | 0$∙$97 (0$∙$93 - 1$∙$01) |

**TABLE SHOWING: MULTIVARIABLE ANALYSIS OF FACTORS (age, sex and their interaction, pre-existing disease status, pre injury anticoagulation status, Marshall CT brain injury classification, ED GCS and pupillary reactivity, presence of significant extracranial injury, causal energy transfer mechanism and its interaction with age) PREDICTING IN HOSPITAL MORTALITY IN 7792\* WARD ADMISSION PATIENTS FROM THE CENTER TBI REGISTRY \*excluding 432 patients with missing GCS Sum Score +/or discharge status AUC=0.92 GCS=Glasgow Coma Score, ED= Emergency Department, CT= CT brain scan, CI=Confidence Interval, IQR=Interquartile range, AIS=Abbreviated Injury Scale,,**